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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,559	03/18/2004	Gunter Krasser	P2003,0160	5672

29393 7590 08/03/2007  
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EXAMINER
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YUN, EUGENE

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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08/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/803,559

Applicant(s)

KRASSER ET AL.

Examiner

Eugene Yun

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Cook (US 6,996,165).

Referring to Claim 1, the applicant's admitted prior art teaches a circuit for communicating signals, comprising:

a transmit amplification device for transmitting signals (see TX and PA in fig. 3 "prior art");

a receive amplification device for receiving signals (see RX and LNA in fig. 3 "prior art");

an antenna connected to the amplification devices (see A in fig. 3 "prior art");.

The applicant's admitted prior art does not teach the transmit amplification device including more than one amplification stage, the receive amplification device including more than one amplification stage, and wherein the amplification devices both include in common one of the amplification stages as a joint amplification stage.

Cook teaches the transmit amplification device including more than one amplification stage (see 322 and 324 in fig. 3), the receive amplification device including more than one amplification stage (see 318 and 320 in fig. 3), and wherein the amplification

devices both include in common one of the amplification stages as a joint amplification stage (see 326, 328, 333, and 334 in fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Cook to the applicant's admitted prior art in order to decrease hardware costs in a transceiver.

Referring to Claim 10, Cook also teaches that each of the amplification devices includes first and second said amplification stages, the first and second amplification stages of the transmit device operationally corresponding to the first and second amplification stages of the receive device, respectively, and wherein the joint amplification stage is the first amplification stage of the receive amplification device and is also the second amplification stage of the transmit amplification device (see fig. 3 and col. 4, lines 64-67).

3. Claims 2-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art and Cook and further in view of Baker et al. (US 6,606,483).

Referring to Claim 2, the combination of the applicant's admitted prior art and Cook do not teach the joint amplification stage including a symmetrical MOS transistor. Baker teaches the joint amplification stage including a symmetrical MOS transistor (see col. 5, lines 60-66). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Baker to the modified

device of the applicant's admitted prior art and Cook in order to more efficiently use power when amplifying an input signal.

Referring to Claim 3, Cook also teaches that each of the amplification devices includes first and second said amplification stages, the first and second amplification stages of the transmit device operationally corresponding to the first and second amplification stages of the receive device, respectively, and wherein the joint amplification stage is the first amplification stage of the receive amplification device and is also the second amplification stage of the transmit amplification device (see fig. 3 and col. 4, lines 64-67).

Referring to Claims 4, 7, 11 and 14, Baker also teaches a first switching device connected to one of the amplification stages of the transmit amplification device other than the joint amplification stage for switching off the transmit amplification device while the receive amplification device is receiving signals, and a second switching device connected to one of the amplification stages of the receive amplification device other than the joint amplification stage for switching off the receive amplification device while the transmit amplification device is transmitting signals (see col. 5, lines 46-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Baker to the modified device of the applicant's admitted prior art and Cook in order to more efficiently use power when amplifying an input signal.

Referring to Claims 5, 6, 8, 9, 12, 13, 15, and 16, Baker also teaches that the receive amplification device has an input impedance that is matched to a load impedance of the transmit amplification device (see col. 6, lines 42-59).

### ***Response to Arguments***

4. Applicant's arguments filed 5/22/2007 have been fully considered but they are not persuasive.

The applicant argues that the Cook reference does not teach "the amplification devices both include in common one of the amplification stages as a joint amplification stage". Firstly, the claims do not state that the amplifier device is provided to both the transmitter and receiver stage. It only states a "joint amplification stage". No other specifics are added, especially when it comes to the actual amplifier devices. The path that connects the receiver and transmitter stage include the amplifiers 326, 328, 333, and 334, so therefore, these amplifiers are in the joint amplifier stage.

For the above reasons, the examiner stands by his rejection.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (571) 272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner  
Art Unit 2618



MATTHEW ANDERSON  
SUPERVISORY PATENT EXAMINER